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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of:	
Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to Mobile-Satellite Service and Radio Determination Satellite Service in the 1610-1626.5 MHz and 2483.5-2500 MHz Bands; and	CC Docket No. 92-166
Amendment of Section 2.106 of the Commission's Rules to Allocate the 1610-1626.5 MHz and the 2483.5-2500 MHz Bands for Use by Mobile-Satellite Service, Including Non-Geostationary Satellites	Et Docket No. 92-28

REPLY IN SUPPORT AND OPPOSITION IN PART TO THE JOINTLY FILED COMMENTS OF MOTOROLA AND LORAL/QUALCOMM SATELLITE SERVICES

CELSAT, INC. ("CELSAT") has designed and developed an MSS based Hybrid Personal Communications System ("HPCS") through which it proposes to offer very high capacity, highly functional, low cost personal mobile position determination, voice and data services using a geostationary space/ground cellular system sharing a common spectrum band using CDMA spread spectrum technology. CELSAT has filed a Petition for Rule Making requesting that the RDSS L/S-Band be authorized for such systems.[1] Alternatively, CELSAT has proposed that it be permitted to at least use the RDSS L/S-Band for the MSS

[1] See, Petition for Rulemaking, RM--7927, filed February 6, 1992.

space component of its hybrid MSS/PCS system.[2] CELSAT has not, however, filed an application for MSS authority in the RDSS L/S-bands. CELSAT is awaiting clarification of its opportunity to file an application in the subject band for MSS purposes, on a shared basis if necessary.[3] Accordingly, CELSAT has an interest in these bands and stands to be affected by the joint proposal of Motorola Satellite Communications, Inc. and Loral/Qualcomm Satellite Services, Inc., ('Joint Proposal") filed in the above-captioned proceeding on October 8, 1993.[4]

CELSAT supports in principle but opposes, in one very important respect, the purported solution to the treatment of the RDSS L/S-Band proposed in the Joint Proposal. CELSAT opposes those aspects of the proposal which would expressly exclude from the subject band geostationary-based MSS systems. CELSAT supports, however, just as it did when it first proposed it, the principles of the modified "elements of consensus" as a viable approach to the use of the RDSS L/S-Band without, of course, the aforementioned limitation.

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[2] See, CELSAT Petition for Reconsideration, ET Docket NO. 92-28, October 5, 1992. CELSAT would then both pursue another allocation for an additional 5-10 MHZ for the terrestrial ground cellular component and also seek to attract and serve on a roaming MSS basis users of other licensed PCS systems in the 2 GHz band.

[3] While disposition of the RDSS L/S-Band issues are pending, and in recognition of its unique ability to operate in and share with incumbents spectrum in the Emerging Technology Bands, CELSAT has amended its petition in RM 7927 to include a request for access to the bands at 1970-1990 and 2160-2180 MHz on a fully hybrid basis. See, Amendment to Petition for Rulemaking, RM 7927, filed July 7, 1993.

[4] Joint Comments were also filed by TRW, Constellation and Ellipsat on October 8, 1993. To the extent that they, too, propose to exclude geostationary applicants, CELSAT opposes their comments for the same reasons discussed herein. Otherwise, CELSAT opposes their proposed band segmentation approach outright.

Inasmuch as it is unclear at this late stage in the subject proceedings how much weight if any will be given to the Joint Proposal, CELSAT will only highlight the basis for its support of the principles and the grounds for its opposition to the limitation.

The Sharing Aspects of the Joint Proposal

CELSAT cannot help but urge the adoption of the those aspects of the Joint Proposal that provide for the allocation of the full band to every candidate applicant, and then provides for modified full band sharing of the spectrum among only those systems which succeed in attaining operational status. Indeed, the genesis of each of the key elements of the modified elements of consensus were first disclosed and espoused by CELSAT at the conclusion of the Negotiated rule Making Proceeding.[5] And, indeed, it was CELSAT that provided the underlying seminal analyses that demonstrated: first, that both LEO and GEO satellites can share the same spectrum and therefore are not inherently incompatible;[6] and

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[5] CELSAT first introduced the framework to a shared allocation of the full RDSS L/S spectrum on March 18, 1993, to the NRM Proceeding facilitator, Working Group I Chairman, Thomas Tycz and Gerald P. Vaughn. It submitted extensive comments and refinements to the facilitator and the MSSAC on March 25 and 26, 1993, the most significant refinements of which have been incorporated in the Joint Proposal's so-called modifications to the elements of consensus. The purpose for highlighting CELSAT's contribution in this respect is not so much to claim credit as it is to convey its depth of understanding of the proposal.

[6] See, e.g., CELSAT Petition for Reconsideration, Appendix B "LEO-GEO Compatibility" by Dr. A. J. Mallinckrodt, October 5, 1992. In its Notice of Proposed Rule making and Tentative Decision in ET Docket No. 92-28 the Commission had rejected AMSC's efforts to participate in the RDSS band with LEO systems because the Commission believed, and AMSC was unable to show otherwise, that LEO and GEO systems were inherently technically incompatible. CELSAT has shown that such incompatibility is not a fact of physics, but merely a function of certain initial misunderstandings apparently pervading throughout the industry. CELSAT laid the ground work by which it has since been proved and accepted by others that such incompatibility is not true, particularly not in the case of CELSAT's design.

second, through CDMA and full band interference sharing and PFD allocation, multiple systems can share the same spectrum with each other.[7] Given this level of contribution to the feasibility and conceptual design of the overall solution, CELSAT submits that it is entitled to considerable weight in expressing its view that the Joint Proposal need not be limited -- indeed, should not be limited -- in the way proposed. To do so will grossly understate the full sharing potential and thus the public interest benefits of the RDSS L/S-Band for MSS.

The Exclusionary Aspects of the Joint Proposal

There is no technical or operational rationale that requires the exclusion of geostationary satellites from the RDSS L/S-Bands. Yet, both the Joint Proposal and the counter-proposal by the other applicants unabashedly request that the Commission exclude from the subject MSS band geostationary satellite systems so as to "give [non-geostationary] systems an opportunity to expand to meet anticipated market demand without being crowded out by the currently authorized geostationary MSS system."[8] Further, the Joint Proposal asks the Commission to place a freeze on technology, in effect, by not accepting any new satellite system applications, by first assigning any new MSS allocations for use exclusively by the

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[7] See, CELSAT Consolidated Reply, Appendix Supplemental Appendix E , April 24, 1992; CELSAT Comments and Application, CC Docket 92-166, Appendix entitled "Band-Sharing Coordination of Wide-Band Mobile Satellite Services", Dr. A. J. Mallinckrodt, September 3, 1992, and various other papers and submissions further developing these principles as submitted by Dr. Mallincrodt throughout the Negotiated Rulemaking Proceedings.

[8] Joint Proposal, p. iii. Although the Joint Proposal purports to seek protection only against the "currently authorized geostationary MSS system" the clear effect of the requested limitation is to preclude all geostationary systems, both current and planned.

pending applicants, and by enforcing strict standards of financial qualifications.[9] CELSAT is confident that the Commission will see these brazenly anticompetitive proposals for what they are and summarily dismiss them as unlawful and otherwise contrary to the public interest.

The one aspect of the Joint Proposal which is particularly disturbing to CELSAT concerns the blatancy with which the applicants continue to attempt to foreclose CELSAT from these bands. It is most ironic that these same proponents who have been opposing CELSAT all along on the grounds that a CELSAT application is automatically precluded in these bands because, as an allegedly "mutually exclusive" system, it is barred under the traditional "cutoff" rules, now acknowledge that, indeed, there is no mutual exclusivity after all.[10] It is especially amusing that the demonstrative proof of the sharing techniques and the elements of consensus allocation scheme that make the mutual exclusivity issue go away were, in fact, undeniably disclosed and proposed by CELSAT -- the very entity which the other proponents seek to exclude by their unlawful modifications to the CELSAT solution.

The applicant proponents can't have it both ways. If, indeed, there is no mutual exclusivity (as CELSAT has urged all along[11]), then there is no justification for not entertaining CELSAT's application under a second cutoff round. Now that CELSAT has

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[9] Id., p. iv.

[10] See, Joint Proposal, p. ii, ". . . the joint proposal represents a compromise which . . . avoids mutual exclusivity . . . ."

[11] See, e.g.,letter from CELSAT counsel, Victor J. Toth to Chairman Alfred Sikes, July 26, 1992, in which it summarized the absence of any mutual exclusivity and the alternative ways in which CELSAT could share with one or more or all of the other applicants.

convincingly demonstrated how all viable systems could operate in the subject band, the applicants have resorted to the most conspicuously anticompetitive regulatory device to exclude the most deserving and innovative system from their ranks. Such a result is manifestly unjust and will not be tolerated by CELSAT.

Conclusion

The Joint Proponents are not acting in good faith; they are misleading the Commission in palming off as their own a multiple entry solution for the sharing of the RDSS band while claiming that their is no room left for CELSAT -- the real innovator behind it all. The Commission should adopt the essence of the Joint Proposal, but instead of adopting the limitation it ought to defer instead, to what the majority of the applicants touted in their contribution to the Report of the MSS Negotiating Rule Making Committee:

> "There is sufficient spectrum to accommodate all of the pending applicants with some adjustments to all currently proposed system designs and CELSAT. " ¶8.4.1
>
> "This is the only approach that allows the pending applicants to share on a co-frequency, co-coverage basis with each other and with the systems operated by other countries using CDMA and still permit entrance by CELSAT." ¶8.4.4
>
> In recognition of the substantial net increase in U.S. MSS capacity to be realized through the addition of yet another CDMA applicant such as CELSAT and the incremental public benefit which would flow therefrom, and subject to the limitations and rights of current applicants under the cutoff rules, the IWG1 recommends that the CELSAT system receive the fair consideration to which it is entitled as a new entrant when and if it chooses to formalize the work which it has done with respect to bandsharing in an FCC application." ¶8.4.9[12]

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[12] Final Report of the Majority of the Active Participants of Informal Working Group 1 to the Above 1GHz Negotiated Rulemaking Committee, April 6, 1993.

Accordingly, the Commission should adopt the recommendation of the Joint Proposal, as further modified herein.

Respectfully submitted,
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October 23, 1993

CERTIFICATE OF SERVICE

This is to certify that a copy of the foregoing Reply has been served on all parties to this proceeding by depositing a copy in the US Mail, addressed to each individual on the attached list.

_____
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October 23, 1993

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